

ABSTRACT FORM
1996 Summer Neuropeptide Conference

Please include title, authors, and affiliations. This form is for both symposia and posters. The blank form may be photocopied for additional abstract submissions. Please type in camera-ready format. The book of abstracts will be distributed at the meeting.

Dimensions of Abstract: 20 cm x 12 cm

Dimensions of Poster Boards: 5 feet wide x 4 feet high (150 cm wide x 120 cm high)

Neurotransmitter and Neuropeptide Alterations in Alzheimer's Disease.

Vahram Haroutunian, Steven Gabriel and Kenneth L. Davis. Department of Psychiatry, The Mount Sinai School of Medicine, New York, NY and the Bronx VA Medical Center, Bronx, NY.

Cerebrocortical deficits in the levels of a variety of neuropeptides are among the characteristic features of Alzheimer's disease (AD). These deficits, though pronounced, are neither uniform across regions of the cerebral cortex, nor evident for all neuropeptides. Because neuropeptides are localized to specific cerebrocortical cell types, and because they are often co-localized with specific neurotransmitter systems, patterns of neuropeptide deficits can provide insight regarding the vulnerability of specific neuronal populations to the disease process. Comparison of patterns of neuropeptide deficits in AD with neuropeptide deficits in aged schizophrenics suggests that different neuropeptides, and by extension different cell groups, are differentially affected in the two diseases. In elderly schizophrenics the pattern of frontal cortical neuropeptides deficits is $SLI > NPY > VIP \geq CCK \geq CRH$, whereas in the same region of the cerebral cortex the pattern of neuropeptide deficits is $CRH \geq SLI > CCK > VIP = NPY$. Analysis of neuropeptide deficits in schizophrenics suggests that the calbindin-immunoreactive, kainic acid / AMPA but not NMDA sensitive, SLI, NPY, and SLI+NPY co-localizing GABAergic neurons of superficial layers of the cortex are particularly vulnerable to the disease process. In contrast, the neuropeptide deficits pattern in AD implicates the vulnerability of those SLI localizing neurons which do not also co-localize NPY. This differential vulnerability of SLI vs. NPY vs. SLI+NPY co-localizing hypothesis is supported by the generally greater reduction of SLI in schizophrenics relative to AD cases. Additional support for this hypothesis can be gleaned from the known co-localization of NPY with NOS / NADPHd+ neurons which do not appear to degenerate in AD. Despite the profound reductions in the levels of these different neuropeptides in cognitively impaired AD and schizophrenic cases, the levels of none of the neuropeptides examined in any of the cortical region studied correlated significantly with the magnitude of the cognitive deficits or with the magnitude of neuropathological lesions such as the density of neuritic plaques and neurofibrillary tangles. In contrast to the neuropeptides, the profound deficits in cortical cholinergic markers are relatively uniform across the different cortical regions sampled from AD cases and correlate significantly with the magnitude of cognitive impairment and the density of neuropathological markers. These latter findings suggest that if neuropeptide deficits are associated with any of the symptoms of AD, they are more likely to be associated with non-cognitive behavioral impairments than with the magnitude of dementia.

Special audiovisual needs other than a slide projector? _____

Mail to: Dr. Jacqueline Crawley, National Institute of Mental Health, Building 10 Room 4N212, Bethesda, MD 20892-1380 USA
Deadline date is: April 5, 1996

CONFERENCE AND HOTEL LOCATIONS

Harborview Hotel, 131 North Water Street, Edgartown

Registration, Sunday, June 23rd, 10 AM to 3:30 PM, Lobby outside Menemsha Room (contact conference organizers for registration at other times)

Keynote Lecture and Reception, Sunday 4:00 PM to 6:30 PM, Menemsha Room

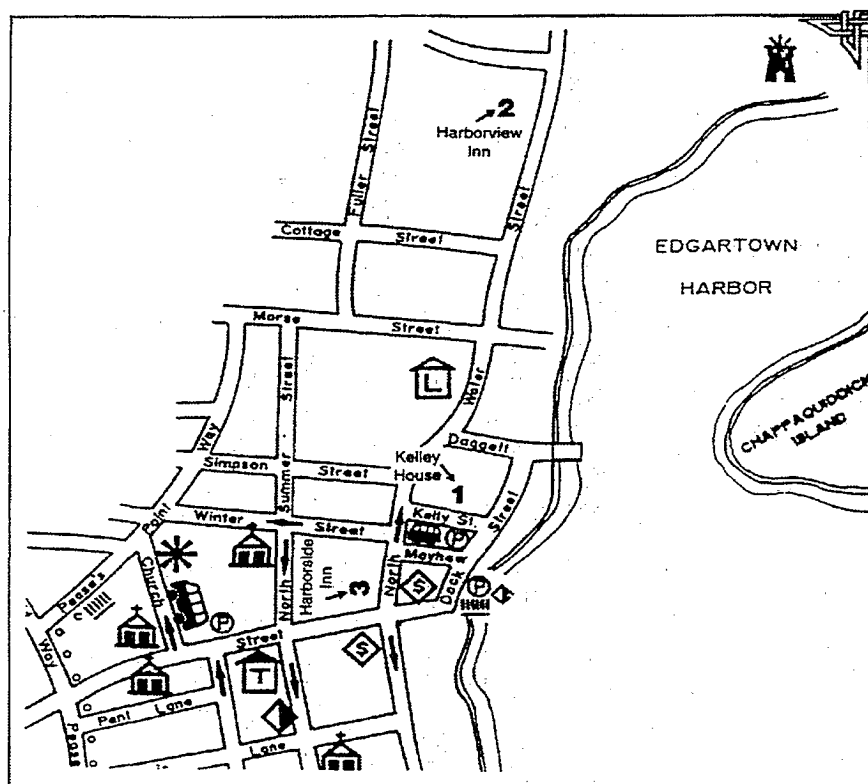
All Symposia, Monday through Thursday, 8:30 AM, Tuesday 4:30 PM, Menemsha Room

Poster Session, Monday 5:00 to 7:00 PM, Edgartown Room

Conference Banquet, Wednesday 7:00 PM, Edgartown Room

Kelley House, 23 Kelly Street (no conference events)

Colonial Inn, 38 North Water Street (no conference events)



GRADUATE STUDENT AND POSTDOCTORAL FELLOW AWARDS

*Pamela Kent
School of Psychology
University of Ottawa
Ottawa, Ontario, CANADA*

*Ms. Judith McIntosh
School of Psychology
University of Ottawa
Ottawa, Ontario, CANADA*

PRELIMINARY PROGRAM
1996 SUMMER NEUROPEPTIDE CONFERENCE

June 23-27th, Martha's Vineyard, MA, USA

Sunday, June 23rd

4:00pm WELCOME

Jacqueline Crawley and Stafford McLean, Conference Co-Organizers

4:15 KEYNOTE LECTURE

Jeffrey M. Friedman, M.D., Ph.D.
Rockefeller University, New York, NY
Lipostasis and the Control of Body Weight

5:15 OPENING RECEPTION

Monday, June 24th

AM SYMPOSIUM: Neuropeptide Y: Preclinical Advances

Chair: Markus Heilig

8:30 Markus Heilig, Karolinska Hospital, Stockholm, Sweden

Functional Role of Neuropeptide Y in the Central Nervous System

9:00 Mary Walker, Synaptic Pharmaceutical Corporation, Paramus, NJ

The Y-Type Receptor Family: Cloned Receptors for Neuropeptide Y, Peptide YY, and Pancreatic Polypeptide

9:30 Donald Gehlert, Lilly Research Laboratories, Indianapolis, IN

*Recent Advances in the Molecular Pharmacology of NPY Receptors:
The Search for the Appetite Receptor*

10:00 *Coffee Break*

10:30 Alejandro Daniels, Glaxo Wellcome Inc., Research Triangle Park, NC

Functional Antagonism of Neuropeptide Y Receptors

11:00 Claudine Serradeil-Le Gal, Sanofi Recherche, Toulouse France

*The First Generation of Orally-Active NPY Y₁ Antagonists:
Pharmacological Profile of SR 120819A*

11:30 Yvan Dumont, McGill University, Montreal, Canada

*Neuropeptide Y Receptor Subtypes in Mammalian Brain: Evidence for a BIBP 3226 Insensitive
Binding Site Labeled with ¹²⁵I-Leu³¹, Pro³⁴-PYY*

5:00-7:00pm WINE AND CHEESE POSTER SESSION

Tuesday, June 25th

AM SYMPOSIUM: Neuropeptides and Mechanisms of Drug and Alcohol Dependence
Chair: Friedbert Weiss

- 8:30 Larry Grupp, University of Toronto, Canada
Regulation of Alcohol Intake by Angiotensin Mechanisms
- 9:00 Friedbert Weiss, Scripps Research Institute, La Jolla, CA
Role of CRF in Drug and Alcohol Withdrawal Syndromes
- 9:30 Zoltan Sarnyai, Rockefeller University, New York, NY
Role of Oxytocin in the Neuroadaptation to Psychostimulant Drugs
- 10:00 *Coffee Break*
- 10:30 David Malin, University of Houston, Houston, TX
Role of Neuropeptide FF in Opiate Tolerance and Dependence
- 11:00 Glen Hanson, University of Utah, Salt Lake City, UT
Effects of Psychostimulant Drugs on Neurotensin Systems in Limbic Regions

PM SYMPOSIUM: Limbic-Hypothalamic Peptides in Reproductive Endocrinology
Chair: Louis Muglia

- 4:30 Donald Pfaff, Rockefeller University, New York, NY
Neuropeptide Modulation of Reproductive Behavior
- 5:00 Jon Levine, Northwestern University, Evanston, IL
Neuropeptide Y and its Receptors in the Regulation of Reproductive Hormone Secretion
- 5:30 William Rostene, INSERM U 339, Paris, France
Neurotensin Effects in Hypothalamic Neuroendocrine Systems
- 6:00 Paul Micevych, University of California, Los Angeles, CA
Opiate-CCK Interaction in Limbic-Hypothalamic Circuits Regulating Reproductive Behaviors
- 6:30 Louis Muglia, Harvard Medical School, Boston, MA
Targeted Mutation of Neuropeptides Regulating Reproduction in the Mouse

Wednesday, June 26th

AM **SYMPOSIUM: Mechanisms Mediating the Neurotrophic Actions of Neuropeptides**
Chair: Richard Zigmond

8:30 Richard Zigmond, Case Western Reserve University, Cleveland, OH
Mechanisms of Regulation of Neuropeptide Expression After Neuronal Injury

9:00 Ray Hill, Merck Sharp and Dohme Research Laboratories, Harlow, England
Acidic Fibroblast Growth Factor Stimulates Axonal Regeneration

9:30 Walter Lichtensteiger, University of Zurich, Switzerland
Stage- and Region-Specific Expression of Different Melanocortin Receptor Types in Developing Central and Peripheral Nervous System: Are they Functional?

10:00 *Coffee Break*

10:30 Kim Seroogy, University of Kentucky, Lexington, KY
Neurotrophic Factors and their Receptors in Central Catecholamine Systems: Expression and Regulation

11:00 Doug Brenneman, National Institute of Child Health and Human Development, Bethesda, MD
Vasoactive Intestinal Peptide Increases Neuronal Survival Through an Astroglia-Derived Stress Protein

11:30 Jeff Kordower, Rush Presbyterian-St. Luke's Medical Center, Chicago, IL
Grafts of Trophic Factor Secreting Cells in Rodents and NonHuman Primate Models of Neurodegenerative Disease

7:00pm **CONFERENCE BANQUET**
Announcement of Graduate Student Fellow Awards

Thursday, June 27th

- AM** **SYMPOSIUM: Neuropeptides as Cognitive Enhancers in the Aged Brain: Hopes and Realities**
 Chair: Remi Quirion
- 8:30 Vahram Haroutunian, Mount Sinai School of Medicine, Bronx, NY
 Neurotransmitter and Neuropeptide Alterations in Alzheimer's Disease
- 9:00 Remi Quirion, Douglas Hospital, McGill University, Montreal, Canada
 Neurotensin as a Modulator of Altered Cholinergic Functions in the Brain: Relevance to Neurodegenerative Diseases
- 9:30 Jacques Epelbaum, INSERM, Paris, France
 Somatostatin: Alterations in Neurodegenerative Diseases and Potential Usefulness in the Clinics
- 10:00 *Coffee Break*
- 10:30 Pierrette Gaudreau, McGill University, Montreal, Canada
 Growth Hormone-Releasing Factor and its Receptors in Aging: Relevance to Altered HPA Functions and Metabolism
- 11:00 David de Wied, Rudolph Magnus Institute, Utrecht, The Netherlands
 Promises and Limitations of Neuropeptides as Cognitive Enhancers
- 11:30 Ilana Gozes, Tel Aviv University, Israel
 Neuroprotective Strategy for Alzheimer's Disease: Intranasal Administration of Neuropeptides
- 12:00 **Round-Up and Final Discussion**

The Summer Neuropeptide Conference is an Affiliate of
The International Neuropeptide Society